



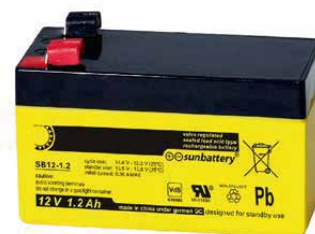
valve regulated  
sealed lead acid type  
rechargeable battery

⊕⊖ **sunbattery**®

# SB12-1.2(12V1.2AH) (SB12-1.2V0)

## Specification

Nominal Voltage	12V		
Nominal Capacity(20HR)	1.2AH		
Dimensions	Length	97 ± 1mm (3.82 inches)	
	Width	43 ± 1mm (1.69 inches)	
	Container Height	52 ± 1mm (2.04 inches)	
	Total Height (with Terminal)	58 ± 1mm (2.28 inches)	
Approx Weight	Approx 0.57 kg (1.26lbs)		
Terminal	T1		
Container Material	ABS Standard ABS UL94 HB Optional ABS UL94 V0		
Rated Capacity	1.20 AH/0.060A	(20hr, 1.80V/cell, 25°C/77°F)	
	1.12 AH/0.112A	(10hr, 1.80V/cell, 25°C/77°F)	
	1.01 AH/0.202A	(5hr, 1.75V/cell, 25°C/77°F)	
	0.882 AH/0.294A	(3hr, 1.75V/cell, 25°C/77°F)	
	0.728AH/0.728A	(1hr, 1.60V/cell, 25°C/77°F)	
Max. Discharge Current	18A (5s)		
Internal Resistance	Approx 90mΩ		
Operating Temp. Range	Discharge	:-15~50°C (5~122°F)	
	Charge	: 0~40°C (32~104°F)	
	Storage	:-15~40°C (5~104°F)	
Nominal Operating Temp. Range	25 ± 3°C (77 ± 5°F)		
Cycle Use	Initial Charging Current less than 0.36A. Voltage		
	14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C		
Standby Use	No limit on Initial Charging Current Voltage		
	13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C		
Capacity affected by Temperature	40°C (104°F)	103%	
	25°C (77°F)	100%	
	0°C (32°F)	86%	
Self Discharge	SUN SB series batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.		
Life expectancy	3-5 years at 25°C with charge voltage 2.25V/cell.		



## Applications

- ◆ All purpose
- ◆ Uninterruptable Power Supply (UPS)
- ◆ Electric Power System (EPS)
- ◆ Emergency backup power supply
- ◆ Emergency light
- ◆ Railway signal
- ◆ Aircraft signal
- ◆ Alarm and security system
- ◆ Electronic apparatus and equipment
- ◆ Communication power supply
- ◆ DC power supply
- ◆ Auto control system


Comform to:  
IEC60896-21&22 and/or IEC61427

## Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	2.30	1.61	1.32	1.15	0.922	0.709	0.580	0.354	0.270	0.222	0.188	0.163	0.130	0.108	0.059
1.80V/cell	2.83	1.92	1.54	1.30	1.02	0.773	0.624	0.376	0.284	0.233	0.196	0.170	0.134	0.112	0.060
1.75V/cell	3.36	2.17	1.69	1.41	1.09	0.821	0.656	0.392	0.294	0.240	0.202	0.174	0.138	0.114	0.061
1.70V/cell	3.81	2.39	1.83	1.52	1.14	0.853	0.684	0.409	0.303	0.246	0.207	0.179	0.140	0.116	0.062
1.65V/cell	4.20	2.57	1.94	1.59	1.19	0.886	0.713	0.421	0.311	0.251	0.211	0.182	0.142	0.117	0.063
1.60V/cell	4.41	2.68	2.02	1.65	1.23	0.906	0.728	0.434	0.318	0.258	0.216	0.186	0.145	0.119	0.063

## Constant Power Discharge (Watts/cell) at 25 °C (77°F)

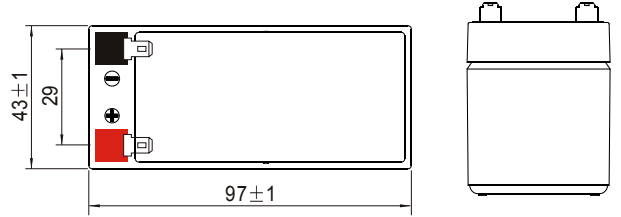
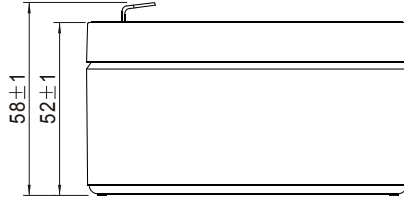
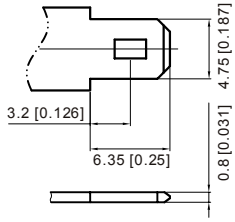
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	4.35	3.06	2.55	2.23	1.80	1.39	1.14	0.701	0.536	0.442	0.377	0.327	0.261	0.217	0.120
1.80V/cell	5.28	3.61	2.93	2.50	1.98	1.51	1.22	0.741	0.560	0.462	0.390	0.339	0.269	0.224	0.121
1.75V/cell	6.18	4.05	3.20	2.70	2.10	1.59	1.28	0.768	0.577	0.474	0.399	0.345	0.274	0.226	0.121
1.70V/cell	6.93	4.42	3.43	2.88	2.19	1.64	1.33	0.796	0.592	0.483	0.406	0.352	0.277	0.229	0.122
1.65V/cell	7.54	4.69	3.59	2.99	2.26	1.70	1.37	0.814	0.604	0.490	0.413	0.357	0.280	0.231	0.124
1.60V/cell	7.79	4.82	3.70	3.05	2.30	1.72	1.39	0.834	0.615	0.499	0.419	0.362	0.284	0.234	0.124



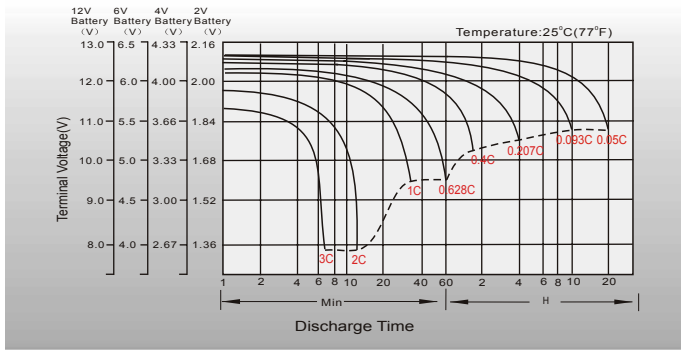
# Dimensions

## T1 Terminal

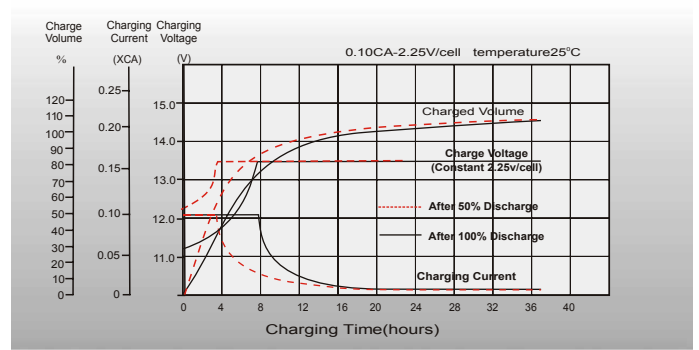
Unit: mm [inches]



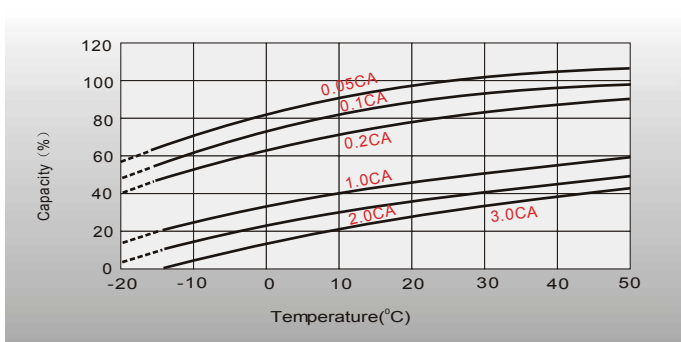
## Discharge Characteristics



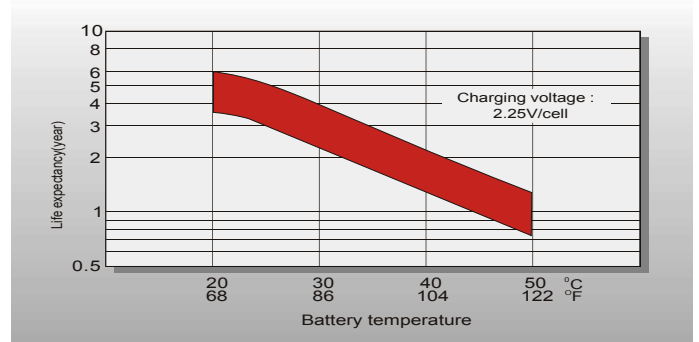
## Float Charging Characteristics



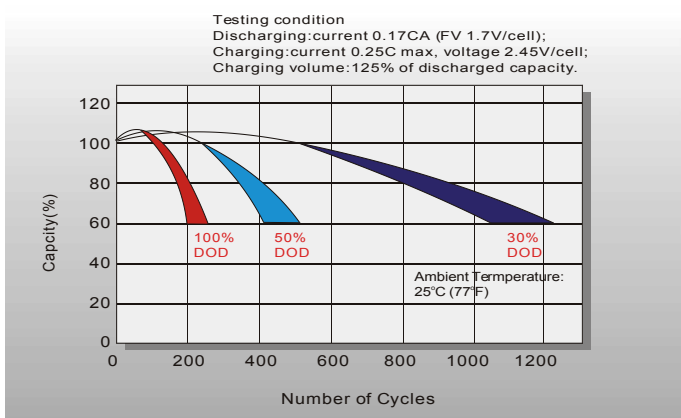
## Temperature Effects in Relation to Battery Capacity



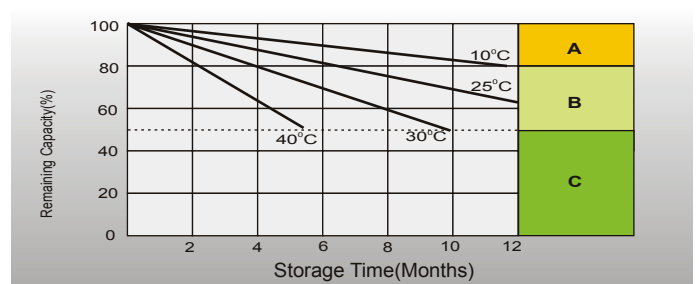
## Effect of Temperature on Long Term Float Life



## Cycle Life in Relation to Depth of Discharge



## Self Discharge Characteristics



- A** No supplementary charge required (Carry out supplementary charge before use if 100% capacity is required.)
- B** Supplementary charge required before use. Optional charging way as below:
  1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.
  2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.
  3. Charged for 8-10 hours at limited current 0.05CA.
- C** Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this is reached.